



Question(s): 5/13;

Geneva, 14-21 June 2004

Ref. : TD 12 (WP 2/13)

Source: Rapporteur Group for Q.5/13 (Geneva, 7 -11 June 2004)

Title: Using UDP port numbers as connection de-multiplexers

LIAISON STATEMENT

To: IETF – PWE3

Approval: Agreed to at the Q.5/13 Rapporteur group meeting

For: Information

Deadline:

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Q.5/13 is extending ITU-T Recommendations specifying interworking LSPs (PWs) over MPLS networks, to networks based on UDP/IP.

We understand that your charter also defines UDP/IP as a possible packet switched network infrastructure.

Due to the lack of an interworking LSP label, a connection de-multiplexing mechanism must be devised for this case.

Our analysis has uncovered five possibilities for using UDP port numbers as connection de-multiplexers, namely:

1. Use of destination port as application de-multiplexers, and source + destination socket as connection de-multiplexers. This method (used by HTTP) restricts a pair of end-points to a single simultaneous connection, and hence is not relevant for interworking LSPs (PWs).
2. Use of destination port number to identify a protocol setup message, and implicit allocation of port numbers by originator. This method (used by telnet) is limited to asymmetric applications, and so is not relevant for interworking LSPs (PWs).
3. Use of destination port number to identify a control protocol, and explicit allocation of port numbers (either downstream or upstream). This method (used by FTP) could be applicable to interworking LSPs (PWs), but would require the development of a new control protocol. Such a protocol could be based on a subset of targeted LDP.

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4. Use of destination port number as application de-multiplexer, and source port number as connection de-multiplexer. This method (used by the draft-ietf-pwe3-tdmoip-01.txt) is possibly the simplest to implement, but non-standard.
5. Use of destination port number as connection de-multiplexer, and optionally source port number as application de-multiplexer. This method (the first part of which is used by RTP) seems to violate both conventional usage of destination port numbers as application de-multiplexers, and common sense by differentiation between different sources based on destination port.

Since we have to complete our draft Recommendation shortly, we would appreciate that you inform us of your preferred method.
